



## Lake County Engineer's Office

# Retaining Wall Design Guidelines

The Lake County Engineer's Office shall review the information for conformance with generally accepted design and construction means and methods. Lake County assumes no responsibility or liability for the design, construction or long term integrity of the wall. **Review by the County is required for walls 48 inches or greater in height.**

General things to consider for design include but are not limited to:

- The types of wall systems that rely on carefully placed reinforced fill areas shall have these critical areas clearly marked on the approved site plans to restrict future disturbance of construction activity.
- Provisions to safely restrict motorists and pedestrians from falling off the wall shall be provided by means of a generally accepted ODOT and/or OSHA barrier such as guardrails and railings that are designed for those load cases.
- The interface or common point of the independent wall and permanent structure foundations shall be carefully considered to address safety, drainage, long term settlement and maintenance issues for wall integrity.

No construction work associated with the wall shall begin until documents have been submitted and reviewed by the County. The following information shall be provided on the plans when submitting information for review.

1. The wall manufacturer, if applicable shall provide Plans sealed by a Registered Professional Engineer with direct knowledge of the design of the proposed wall system. Additionally, an Ohio Professional Engineer stamped site plan depicting all features of the wall and safety related elements shall be provided. Design information providing the wall type and construction requirements shall also indicate the proposed wall meets global and rotational stability checks.
2. Existing soil conditions at the exact wall location should be investigated and illustrated to the reviewer. Wall loads and actual soil capacity used in the calculations for the requirements of the specific wall type and size proposed shall be provided in the review submittal.
3. Ground water drainage behind the wall shall be provided through use of a 6" diameter polyvinyl chloride schedule 40 perforated pipe surrounded on the top and sides by a minimum of 6" of 57 stone. The pipe shall run the entire length of wall sloped to drain beyond a minimum of 5 feet in front of the wall.
4. Backfill within the reinforced fill area shall be a graded granular material approved by the Registered Engineer responsible for the wall design.
5. Underground utilities shall be shown relative to the wall location. No utilities shall be placed within the reinforced fill area of the wall.
6. Construction inspection of the wall is required by the Registered Engineer responsible for the design. Written documentation of construction activities shall be submitted to the building department for filing purposes.